CONDITIONS ATTENDING THE PERIOD OF HIGH TEMPERATURE AND DROUGHT IN THE VICINITY OF ABILENE, TEX., DURING THE SUMMER OF 1913.

By W. H. GREEN, Observer.

The present drought, so far as its effects upon the staple crops of the State are concerned, is, in the opinion of several reliable men who have been all over the country, the most severe of any drought in this vicinity since the establishment of the Weather Bureau station in Abilene.

The following, according to the Weather Bureau records, are the most noted droughts of this vicinity: May 31 to August 31, inclusive, 1901, total rainfall 1.09 inches; May 20 to July 13, inclusive, 1910, total rainfall 1.09 inches; May 1 to July 12, inclusive, 1911, total rainfall 0.32 inches; June 19 to July 31, inclusive, 1912, total rainfall 0.30 inches; June 29 to September 9, inclusive, 1913, total rainfall 1.29 inches.

It will be noted from the above that the rainfall has been less, for the same length of time, during the growing season of some other years than during the present year; but the drought during the present year began from 3 to 6 weeks later than usual and yet early enough to seriously damage all staple crops, and so far, September 10, it has lasted from 10 to 20 days later than usual, so that late or fall crops will be almost total failures.

It is estimated by parties believed to be qualified to make such estimates, that the small grain crop, wheat, oats, etc., was about 65 per cent below the average or normal, the feed crop about 50 per cent below the normal, and that the cotton crop will be about 65 per cent below the normal.

The water supply in this section is perhaps more plentiful than during some former droughts, due to the fact that the people have better prepared themselves for such conditions by installing surface tanks, etc. I am informed that there are but few farmers who have not a reasonably plentiful supply of stock water, and that no one in this vicinity is having to drive stock any great distance to water.

The heat has not been especially severe during the present drought, although with a few exceptions moderately high temperatures have obtained since the 1st of July. On July 26 the mean temperature was 9° below the normal, and there have been seven other days since the 1st of July when the temperature was slightly below the normal.

NOTES ON THE HEAT AND DROUGHT OF 1913 AT FORT WORTH, TEX.

By D. S. LANDIS, Local Forecaster.

At Fort Worth, Tex., no rain in excess of a trace occurred during the period from July 28 to September 6, a period of 40 days. During the same time the maximum temperature was above 90° each day, and on 8 days it was 100° or over. The highest temperature reached was 104° on September 5, being the highest September temperature on record at this station.

Effects.—The staple product, cotton, was depreciated to one-half a crop as compared with 1912, and all other products suffered at least half depletion and more in many instances, dependent upon soil and position. Water in all places showed a comparatively lower level than had been noted in any previous record on file. Wells that had never failed before were reported almost waterless, and stock suffered much, having to be driven once a day several miles for water. Grass is dried and powdery, and stock are existing on the short hay incident to this region when subjected to drought, thus promising losses during the coming winter in connection with a prospective continued shortage in water. Corn failed entirely, and gardens were short lived and less than half in productions. The loss in trees and shrubbery is heavy, probably 25 per cent being ruined.

While 1913 had a severer drought than usual, it also suffered from the cumulative effect of deficient rainfall, as the soil has not been thoroughly wetted deep down since 1908, the intervening years being very dry, with the exception of 1912, which was a surface-season year in general.

The mean temperature for 1913, July and August, was not unusual, it being exceeded in the years 1896, 1897, 1899, and 1902.

Drought comparisons show that 1913 had 40 days with only a trace of rain, while 1899 had but a trace from July 26 to September 16, a period of 52 days. The year 1909 had a drought of 43 days, lasting from June 26 to August 8, with but 0.03 precipitation.

Since the drought of 1913 was cumulative, it was the severest on record in its effect upon growing crops and otherwise. Agricultural products are not more than one-half the usual; an unprecedented scarcity of water both for stock and man exists; and there is such a paucity of winter roughness for stock that the loss of life must be immense, since the animals are now poor and water starved. Suffering from great heat was not of importance, since the lack of humidity, and brisk winds at night most of the time permitted more comfort and rest than under damper conditions and less wind movement. The uppermost problem at this writing, September 9, is water for both man and beast.

DROUGHT OF 1913 IN EASTERN TEXAS.

By WALTER B. HARE, Observer, Palestine, Tex.

The drought of the present summer season in eastern Texas was one of the most prolonged, as well as one of the most disastrous, in the climatological history of this section.

During the months of January, February, March, and April the precipitation averaged only slightly below the normal, being 0.42 inch below the normal in January, 0.18 inch in excess of the normal in February, 0.78 inch below in March, and 0.78 inch below in April. Good, soaking rains occurred on March 9, March 12–13, April 3, April 8–9, and April 22. The spring showers acted directly on the young cotton plants, producing a copious supply of sap and noticeably advancing the plant growth. The month of May was also favorable up to the 22d, beneficial showers falling on the 4th–5th, the 15th–16th, and the 20th. The total rainfall for May was 2.83 inches, or 2.06 inches below the normal.

On May 22 the first dry period of the season set in and lasted until June 9—18 days. A fairly good rain, 0.78 inch, occurred on June 9, but this shower continued for only three hours and was by no means the slow, long-continued, copious rain needed at this critical stage of cotton-plant growth. Other light, short showers occurred during the month, and half an inch fell on June 28, but again the shower was of short duration and was rapidly dissipated as surface water.